## **CLAIMS**

1. A method of softening and conditioning natural and synthetic fibers that include more than 40% by weight of fiber conditioning non-ionic surfactants, based on the total weight of softening active substances, which comprises introducing into said fibers a cationic surfactant obtainable by the formation of addition salt of an alkanolamine ester with a mineral organic acid or by quaterization of an alkanolamine ester by reaction with an alkylating agent, said alkanolamine ester prepared by the esterification reaction of an alkanolamine of the general formula (I)

$$R^{3}$$

$$R^{2}-O(CHCH_{2}O)_{n}H$$

$$R^{1}-N$$

$$R^{2}-O(CHCH_{2}O)_{n}H$$

$$R^{3}$$

$$R^{3}$$
(1)

with a dicarboxylic acid, or with a reactive derivative thereof, of the general formula (II)

and with an optionally alkoxylated fatty alcohol of the general formula (III)

$$R^5$$
—O(CHCH<sub>2</sub>O)<sub>n</sub>H (III)

in which formulae R1 is hydrogen, a C1-C6 alkyl group or the residue

 $R^2$  is a  $C_1$ - $C_6$  alkylene group,  $R^3$  is hydrogen or methyl, n is 0 or an integer from 1 to 20,  $R^4$  is an optionally substituted or unsaturated  $C_1$ - $C_{36}$  alkylene group, or arylene, and  $R^5$  is a linear or branched  $C_2$ - $C_{22}$  alkyl or alkenyl group.

- 2. A method according to Claim 1, wherein the alkanolamine of formula (I) is selected from triethanolamine, N-methyldiethanolamine, N-methyldiisopropanolamine and triisopropanolamine, each of which is optionally alkoxylated with ethylene oxide, propylene oxide, or mixtures thereof.
- 3. A method according to Claim 1, wherein the dicarboxylic acid of formula (II) is selected from the group consisting of the thermal oligomerization product of one or more unsaturated fatty acids, succinic, malic, glutaric, adipic, sebacic, pimelic, suberic, maleic, terephthalic acid, and mixtures thereof.
- 4. A method according to Claim 1, wherein the fatty alcohol of formula (III) obtained from fats and oils is of natural origin are optionally hydrogenated and/or alkoxylated.
- 5. A method according to Claim 4, wherein the fatty alcohol of formula (III) is an alcohol obtained from tallow, palm, olive, coconut, sunflower, soya, grape marc or rape, and is hydrogenated or non-hydrogenated and is optionally alkoxylated with ethylene oxide or propylene oxide.
  - 6. A method according to Claim 1, wherein a fatty acid of the general formula (IV)

## $R^6$ —COOH (IV)

in which R<sup>6</sup> is a linear or branched C<sub>6</sub>-C<sub>23</sub> alkyl or alkenyl group, or an alkyl ester or a glyceride of the fatty acid, and/or an optionally alkoxylated polyol is incorporated into the esterification.

- 7. A method according to Claim 1, wherein the molar ratio of the dicarboxylic acid to the alkanolamine is from 0.2 to 1.2; the molar ratio of the sum of the fatty alcohol and the fatty acid to the alkanolamine is from 0.2 to 2.0; and the molar ratio of the fatty acid to the fatty alcohol is from 0 to 10.
- 8. A method according to Claim 7, wherein the molar ratio of the dicarboxylic acid to the alkanolamine is from 0.3 to 0.9.
- 9. A method according to Claim 8, wherein the molar ratio is from 0.4 to 0.8.

- 10. A method according to Claim 7, wherein the molar ratio of the fatty acid to the fatty alcohol is from 0.1 to 5.0.
- 11. A method according to Claim 7, wherein the molar ratio of the fatty acid to the fatty alcohol is from 0.5 to 1.0.
- 12. A method according to Claim 1, wherein the mineral organic acid is selected form the group consisting of hydrochloric, sulphuric, phosphoric, citric and lactic acid.
- 13. A method according to Claim 1, wherein the alkylating agent is selected from the group consisting of methyl chloride, methyl bromide, dimethyl sulphate, diethyl sulphate and dimethyl carbonate.
- 14. A method according to Claim 1, wherein the fibre-conditioning non-ionic surfactant is selected from the group consisting of fatty acids, linear or branched, alkoxylated or non-alkoxylated esters of fatty acids, containing from 8 to 18 carbon atoms, alkoxylated or non-alkoxylated Guerbet alcohols, optionally alkoxylated glycerol and polyglycerol esters, xylitol esters, alkoxylated or non-alkoxylated sorbitan esters, esters of sugars selected from the group consisting of glucose, fructose, galactose, mannose, xylose, arabinose, ribose, 2-deoxyribose and sucrose, C<sub>8-18</sub> fatty alcohols, alkyl polyglucosides, non-ionic surfactants with amide groups derived from amines selected from the group consisting of glucamine, and derivatives of methylethanolamine, diethanolamine, isopropanolamine or monoethanolamine, with linear or branched fatty acids especially those containing from 8 to 18 carbon atoms, waxes selected from the group consisting of paraffins, microcrystalline waxes derived from petroleum, and synthetic waxes, and pentaerythritol esters, having a chain selected from the group consisting of tallow, hydrogenated tallow, palm, behenic and oleic.
- 15. A method according to Claim 14, wherein the fiber-conditioning non-ionic surfactant is an ethoxylated, sorbitan monoester glycerine ester or a pentaerythritol ester, having a tallow, hydrogenated tallow, palm, behenic or oleic chain.
- 16. An aqueous softening composition for textiles or other synthetic or natural fibers, which comprises:
  - (a) the cationic surfactant defined in Claim 1;

- (b) optionally one or more cationic surfactants acting as softeners or conditioners for textiles or other fibers; and
- (c) one or more non-ionic surfactants that condition textiles or other fibres, in which the sum of components (a), (b) and (c) is from 2% to 60% by weight, and relative to the total amount of components (a), (b) and (c),
  - (i) the proportion by weight of component (a) is from 5% to 60%,
  - (ii) the proportion by weight of component (b) is from 0% to 30% and
  - (iii) the proportion by weight of component (c) is from 40% to 95%.
- 17. A composition according to Claim 16, wherein the sum of (a), (b) and (c) is from 3% to 50% by weight, and relative to the total amount of components (a), (b) and (c),
  - (i) the proportion by weight of component (a) is from 20% to 60%,
  - (ii) the proportion by weight of component (b) is from 0% to 20% and
  - (iii) the proportion by weight of component (c) is from 40% to 80%.
- surfactant conditioning textiles or other fibers is selected from the group consisting of fatty acids, linear or branched, alkoxylated or non-alkoxylated esters of fatty acids, containing from 8 to 18 carbon atoms, alkoxylated or non-alkoxylated Guerbet alcohols, optionally alkoxylated glycerol and polyglycerol esters, xylitol esters, alkoxylated or non-alkoxylated sorbitan esters, esters of sugars selected from the group consisting of glucose, fructose, galactose, mannose, xylose, arabinose, ribose, 2-deoxyribose and sucrose, C<sub>8-18</sub> fatty alcohols, alkyl polyglucosides, non-ionic surfactants with amide groups derived from amines selected from the group consisting of glucamine, and derivatives of methylethanolamine, diethanolamine, isopropanolamine or monoethanolamine, with linear or branched fatty acids especially those containing from 8 to 18 carbon atoms, waxes selected from the group consisting of paraffins, microcrystalline waxes derived from petroleum, and synthetic waxes, and pentaerythritol esters, having a chain selected from the group consisting of tallow, hydrogenated tallow, palm, behenic and oleic.
- 19. A composition according to claim 17, wherein the non-ionic surfactant conditioning textiles and other fibers is selected from the group consisting of fatty acids, linear or branched, alkoxylated or non-alkoxylated esters of fatty acids,

containing from 8 to 18 carbon atoms, alkoxylated or non-alkoxylated Guerbet alcohols, optionally alkoxylated glycerol and polyglycerol esters, xylitol esters, alkoxylated or non-alkoxylated sorbitan esters, esters of sugars selected from the group consisting of glucose, fructose, galactose, mannose, xylose, arabinose, ribose, 2-deoxyribose and sucrose, C<sub>8-18</sub> fatty alcohols, alkyl polyglucosides, non-ionic surfactants with amide groups derived from amines selected from the group consisting of glucamine, and derivatives of methylethanolamine, diethanolamine, isopropanolamine or monoethanolamine, with linear or branched fatty acids especially those containing from 8 to 18 carbon atoms, waxes selected from the group consisting of paraffins, microcrystalline waxes derived from petroleum, and synthetic waxes, and pentaerythritol esters, having a chain selected from the group consisting of tallow, hydrogenated tallow, palm, behenic and oleic.